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Determination of 9.2.2007

## **REGULATORY FRAMEWORK FOR THE ACTIVITY OF MOBILE VIRTUAL NETWORK OPERATORS (MVNO)**

### **A. Framework**

1. Within the scope of relevant market assessment procedure, ICP-ANACOM has now assessed most markets; however the analysis of the market for call access and origination in public mobile telephone networks (market 15) has not been yet concluded.
2. Accordingly, operators with significant market power in this relevant market have not yet been identified. Thus, mobile operators are not at present under any regulatory obligation to provide third parties with wholesale access to their networks. Nevertheless, the regulatory framework in force covers in an appropriate manner the activity of MVNOs<sup>1</sup> that arise following a desirable freedom to deal between entities who wish to pursue this activity and mobile operators who support their services over their own radio networks.
3. Some entities (both MNOs<sup>2</sup> and potential MVNOs) have requested of ICP-ANACOM a clarification on how the regulatory framework applies to MVNOs, having been provided all requested information, in accordance with the Electronic Communications Law<sup>3</sup> (ECL).
4. This document was prepared to make the procedure completely transparent, summarizing the regime that applies to MVNOs, especially as regards the general authorization scheme and issues concerning numbering and interconnection rights and obligations.
5. This document does not alter the current regulatory framework – which has always accepted the existence of MVNOs –, yet it is intended to be useful as far as regards the transparency and predictability of regulations, as well as to provide all market participants with the same level of information. As a result, the desirable entry of MVNOs in the market and the attached contestability increase are expected to be more effective.

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<sup>1</sup> Mobile Virtual Network Operators.

<sup>2</sup> Mobile Network Operator.

<sup>3</sup> Law no. 5/2004, of 10 February.

## **B. MVNO concept**

6. There are many economic operations which can be included under the designation MVNO, as they have in common the fact that they do not resort to rights of use for frequencies and are not provided with their own radio access network infrastructures, being thus supported on radio means leased from network operators who hold the respective rights of use.

7. The concept of MVNO implies a direct contractual relationship between the MVNO and the end customer, which is attached to the service provision, and for this reason this concept does not include service distribution activities, where the contractual relationship is established between the end customer and the mobile network operator.

8. Accordingly, MVNOs are entities:

- a) With direct customers, which means they are exclusively responsible for the relationship with end users, directly ensuring towards the latter and towards ICP-ANACOM, the compliance with specific user and subscriber protection rules applicable to the electronic communications sector, such as portability, use of standard contracts approved by the regulatory authority and provision of customer support services, including the provision of information and handling of complaints, billing and collection, as well as other conditions provided for in article 27 of the ECL, where appropriate;
- b) Who design and place in the market their own retail offer, which may freely differ from that of the operator on whose network they are supported, and who define their own business strategies.

9. There are different types of operations which may fall under the MVNO category, according to how many systems and own infrastructures are used, although they all share the features mentioned above.

10. A light MVNO has a few or none communications network infrastructure elements, yet it ensures the means that enable the control of the relationship with the customer. This type of operation ranges from a simpler version, where own SIM cards are not issued, although proprietary platforms for value added services, billing and CRM<sup>4</sup> may be deployed, enabling the control of the relationship with the end customer, to more complex versions, in which case the autonomy towards the MNO increases, as the MVNO additionally issues its own SIM cards and operates some elements of the network infrastructure<sup>5</sup>.

11. A full MVNO holds, in addition to the particulars of a light MVNO, several elements of the transmission system and network infrastructure, including typically MSC<sup>6</sup>, AuC<sup>7</sup>, EIR<sup>8</sup>, VLR<sup>9</sup>, and HLR<sup>10</sup>. It may also issue its own SIM cards. A full

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<sup>4</sup> Customer Relationship Management.

<sup>5</sup> This type of provider is also known as Enhanced Service Provider (ESP).

<sup>6</sup> *Mobile Switching Centre.*

<sup>7</sup> *Authentication Centre.*

<sup>8</sup> *Equipment Identity Register.*

<sup>9</sup> *Visitor Location Register.*

MVNO fails only to hold the right of use for frequencies, and, as such, it does not have the elements of radio access infrastructure (such as base stations or network controllers), in contrast with an MNO.

12. These general MVNO models are only presented hereby to illustrate the diversity of business models that may arise under the general MVNO designation and it should be clearly understood that network operators and interested entities are free to establish the model that best adapts to their specific interests and business strategy.

### **C. General Authorization Scheme**

13. All entities who wish to pursue an activity which could come under the concept of MVNO, as referred above, must notify ICP-ANACOM of the commencement of such activity, as provided for in the ECL. For this purpose, it is not necessary for it to have established an agreement with a network operator holding rights of use for radio frequencies, allowing for the provision of retail mobile telephone services.

14. The activity of MVNOs (both full and light versions) can fall within the category of provision of electronic communications networks and services. As such, under the ECL, it must comply with the general authorization scheme, as well as to the conditions attached to the allocation of rights of use for numbers.

15. All entities who wish to provide electronic communications networks and services are bound to submit previously to ICP-ANACOM a short description of the network or service they wish to provide and to notify an estimated date for starting the activity, without prejudice to other particulars requested eventually by the regulatory authority. For this purpose, these entities must use the notification model and respective form defined by ICP-ANACOM<sup>11</sup>. Upon receipt of notification, ICP-ANACOM shall issue a declaration describing the rights in matters of access and interconnection and, where appropriate, of instalment of resources, presenting them so as to facilitate the exercise of such rights<sup>12</sup>.

16. Any entity providing an electronic communications network is deemed to be a network operator. For this purpose, electronic communications network means “*transmission systems and, where applicable, switching or routing equipment and other resources which permit the conveyance of signals by wire, by radio, by optical or by other electromagnetic means, including satellite networks, fixed (circuit- and packet-switched, including Internet) and mobile terrestrial networks, electricity cable systems, to the extent that they are used for the purpose of transmitting signals, networks used for radio and television broadcasting, and cable television networks, irrespective of the type of information conveyed*” (cfr. point x) of article 3 of ECL).

17. On the other hand, electronic communications services means “*a service normally provided for remuneration which consists wholly or mainly in the conveyance of signals on electronic communications networks, including telecommunications services and*

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<sup>10</sup>Home Location Register.

<sup>11</sup> Available at <http://www.anacom.pt/template15.jsp?categoryId=115459>

<sup>12</sup> Declaration provided for in paragraph 5 of article 21 of ECL.

*transmission services in networks used for broadcasting, ...*”(cfr. point cc) of article 3 of ECL).

18. Whether the activity pursued by the MVNO is deemed as a provision of a network and of electronic communications services (in case the MVNO holds transmission systems and some network elements, such as MSC, AuC, EIR, HLR) or merely as the provision of electronic communications services (in case it uses all elements of the network which supports it), it is subject to the general authorization scheme<sup>13</sup>.

#### **D. Numbering**

19. The provision of electronic communications networks and services may involve the allocation of rights of use for numbers, in which case such allocation must be requested<sup>14</sup>.

20. ICP-ANACOM shall assess the need for numbering resources according to the submitted request, the equipment to be installed by the requiring entity and the services it intends to provide. The requests for numbering resources must be consistent with the notification of commencement of activity and the filling of the respective form.

21. ICP-ANACOM must issue and publicly disclose the decision on the allocation of numbering resources for specific purposes in the scope of the National Numbering Plan within 15 days at the most, yet the decision should be made as soon as possible.

22. The rights of use for numbers shall be granted by units or in blocks, according to the type of service to be provided and where appropriate to the expected number demand, in compliance with the principles and criteria applicable to the management and allocation of the defined numbering resources and other conditions attached to the rights which may be set out by ICP-ANACOM.

23. According to the need demonstrated, MVNOs (both light and full versions) may be granted rights of use for the following numbers:

- a. Mobile Network Code (MNC)<sup>15</sup>. The MNC is allocated per company by units and is subject to the following criteria:
  - i. Existence of a network requiring the identification of own mobile terminals or others (roaming);
  - ii. Existence of a network or equipment that use protocols established in the scope of GSM/UMTS standards to render compatible and ensure the interoperability of services to the end-user.

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<sup>13</sup> The obligations and rights of MVNOs are provided for in ECL, namely articles 22 and 24 to 27 therein.

<sup>14</sup> Article 33 of the ECL determines that the use of numbers depends on the grant of individual rights of use, which may be granted both to providers of electronic communication networks or services and to entities that use those networks or services.

<sup>15</sup> Within the scope of ITU-T Recommendation E.212.

- b. Numbers intended for the provision of publicly available mobile telephone services<sup>16</sup>. In this case, the requiring entity may be allocated blocks of nx10.000 numbers within the “9” numbering level (starting at “92”), “n” standing for the expected and reasoned number demand, at the requiring entity’s choice among the available blocks of numbers;
- c. Short numbers within the 16 and 18 ranges<sup>17</sup>, respectively comprising customer support services and enquiry services – other directories, allocated according to the MVNO preferences and number availability, for each range;
- d. Numbers for the provision of non geographic numbers<sup>18</sup>, where blocks of 10.000 numbers may be allocated based on the preferences of the provider and number availability, and according to the service to be provided<sup>19</sup>;
- e. Addressing numbers of signalling system no. 7, intended for the identification of signalling points required for the establishment of an electronic communications network<sup>20</sup>, assuming the physical existence, on national territory, of one or more exchange international traffic elements using this signalling system;
- f. Issuer identifier numbers, being allocated a code per company issuing international telecommunication cards<sup>21</sup>.

24. Attached to the grant of rights of use for “9” numbers for the provision of mobile telephone services, the rights of use for numbers in the “609” and “669” ranges (starting at “6092” and “6692”) for the consultation and storage of messages, and in the “639” and “659” ranges (starting at “6392” and “6592”) for fax and data services, are implicitly granted as well, as they correspond to the rights of use of granted mobile numbers.

25. The national numbering resources referred above may be reserved for a six-month period, according to management and allocation principles and criteria applicable to numbering resources, until the access agreement is signed<sup>22</sup>. Nevertheless, the allocation shall only take place after the requiring entity presents all the necessary conditions for such allocation, namely the service provision.

26. According to the Portability Regulation<sup>23</sup>, these companies shall be applied the obligations defined therein, according to the type of resources allocated. A single company code corresponding to the NRN<sup>24</sup> format, as provided for in the referred regulation, shall be allocated by units, to each company with portability obligations.

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<sup>16</sup> Within the scope of ITU-T Recommendation E.164.

<sup>17</sup> Criteria for allocation available at: <http://www.anacom.pt/template12.jsp?categoryId=5391> - level “1”.

<sup>18</sup> Within the scope of ITU-T Recommendation E.164 – levels “6”, “7” and “8”.

<sup>19</sup> Criteria for allocation available at: <http://www.anacom.pt/template12.jsp?categoryId=5388>

<sup>20</sup> Within the scope of ITU-T Q.7xx-series Recommendations.

<sup>21</sup> Within the scope of ITU-T Recommendation E.118 – IIN.

<sup>22</sup> Following a notification on the provision of the mobile telephone service, ICP-ANACOM has already reserved numbering resources to the requiring entity.

<sup>23</sup> Regulation no. 58/2005 of 18 August.

<sup>24</sup> Network Routing Number.

27. Companies who are granted rights of use for numbers are subject to the compliance with conditions defined in article 34 of ECL, where appropriate.

#### **E. Payment of spectrum fees**

28. Regardless of their type, MVNOs do not hold rights of use for frequencies for the provision of mobile telephone services; accordingly, they are not subject to the payment of fees for spectrum use.

29. These fees must be paid by the mobile network operator, taking into account, in the current model, the element concerning base stations and the one concerning all mobile stations (terminal stations) supported on its network. In case the MNO hosts one or several MVNOs, and even if the latter are network operators, it shall calculate not only the terminal equipment engaged in its own network, but also the remaining terminal equipment involved in MVNO operations and which are supported on its network.

#### **F. Interconnection**

30. Companies providing publicly available electronic communications networks and services are entitled<sup>25</sup> to negotiate interconnection with and obtain access to or interconnection from other providers of publicly available communications networks and services, under the conditions of and in accordance with ECL.

31. On the other hand, the same law determines<sup>26</sup> that the terms and conditions of access and interconnection provision shall be consistent with obligations imposed by ICP-ANACOM in this matter and that network operators have a right and, when requested by other companies, an obligation, to negotiate interconnection with each other for the purpose of providing publicly available electronic communications services<sup>27</sup>.

32. In this context, MVNOs (both light and full versions) may invoke the obligation to negotiate interconnection, and remaining mobile and fixed operators must ensure service interoperability under the law.

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<sup>25</sup> Pursuant to point a) of article 22 of ECL.

<sup>26</sup> Article 64, paragraphs 1 and 2.

<sup>27</sup> By law, “interconnection” means the physical and logical linking of public communications networks used by the same or a different undertaking in order to allow the users of one undertaking to communicate with users of the same or another undertaking, or to access services provided by another undertaking. Services may be provided by the parties involved or other parties who have access to the network. Interconnection is a specific type of access implemented between public network operators.